If you are using a printed copy of this procedure, and not the on-screen version, then you MUST make sure the dates at the bottom of the printed copy and the on-screen version match.
The on-screen version of the Collider-Accelerator Department Procedure is the Official Version. Hard copies of all signed, official, C-A Operating Procedures are kept on file in the C-A ESHQ Training Office, Bldg. 911A

C-A OPERATIONS PROCEDURES MANUAL

14.24.2 EMS Training for SMD Cryogenic System Maintenance

Text Pages 2 through 5

Hand Processed Changes

HPC No.	Date	Page Nos.	Initials

Approved: ***Signature on File*** _____
Collider-Accelerator Department Chairman Date

Approved: ***Signature on File*** _____
Superconducting Magnet Division Head Date

M. Van Essendelft

Course Title: Superconducting Magnet Division Specific Information for Cryogenic System Maintenance and Operations (Process/Operation)

Course Number AM-ENV-FS6

Because this work activity has been identified as having significant potential to impact the environment, this material has been compiled to provide you with the job-specific information that you must know to protect the environment. Please read the following carefully. If you have any questions concerning the material, contact your supervisor, ES&H Coordinator or the Environmental Compliance Representative.

You may print this material as a handout and use it as a reference aid.
This specific training course is linked to your job-training assessment (JTA). You must read and acknowledge this material as part of the qualification to perform maintenance on and to operate the cryogenic system. Please fill out the Read and Acknowledgement form at the end of the course material and return it promptly to your Training Coordinator.

Environmental Process Evaluation Title: Environmental Training for SMD Cryogenic Systems Maintenance and Operations

Environmental Aspect (These are the processes you do that can impact the environment) Regulated Industrial Waste, Storage and Use of Chemicals

Contacts for the Information (current contacts are found on the Division's ESHQ Web page):

Environmental Compliance Rep
Facility Support Rep
ES&H Coordinator
Training Coordinator

Job Training Assessment Links: AM-31, AM-32 (Superconducting Magnet Division)

Course Objective: **Because your work activities have been identified as having significant potential to impact the environment, this course has been designed to provide you with the job-specific information that you must know to protect the environment.**

1) What potential impacts to the environment are associated with your activities?

- Cleaning and maintenance operations associated with cryogenic systems generate industrial wastes. The following materials used in your work may have adverse impacts if improperly handled:
  - oily water,
  - oily rags, diapers, o-rings, gaskets and shaft seals,
  - Used oil
  - Saturated filters

- Equipment failure could cause release of oil to the cooling water system, which would lead to a release to the sanitary sewer system.

2) What consequences may result if your operations were to impact the environment?

- Mismanagement of oil wastes could contaminate the environment and incur regulatory penalties.
- Improper release of wastes can create loss of the regulator and public trust.

3) What benefits or positive effects would you notice with improved environmental performance?

Benefits with improved environmental performance at C-A Department include:

- Safer, cleaner workplace.
- Clear roles and responsibilities.
- Improved relationship with regulators and the public.
- Control of disposal costs.
- Prevention of remediation costs.

4) What role and responsibility do you have for these potential impacts and environmental performance?

My responsibilities are

- To ensure Industrial wastes are handled according to lab procedures
- To take action when controls fail (such as calling x2222 if spills occur).
- Notify ESH Coordinator or ECR if unexplained loss of oil has been discovered.
- To contact supervision if you are unsure of how to perform the work or if the procedures are unclear or incorrect.
- Follow applicable requirements in the following SBMS Environmental Compliance Subject Area (http://sbms.bnl.gov) - Hazardous Waste Management (Section 1)

5) What controls or procedures are implemented to reduce the potential for emergency?

- Satellite Accumulation Area
- Chemical Management System
- Tier I program and self-assessments

6) How would you respond in an emergency to reduce the potential for environmental impact and what actions could be taken to mitigate the event?

- If loss of oil is suspected, contact ESH Rep or ECR for assistance.
- No specific emergency scenario is likely but, as Laboratory requirements state, call x2222 if an emergency does occur.

7) What pollution prevention and waste minimization techniques have been or could be considered to reduce or eliminate the potential to impact the environment?

Reduced cost and less risk to the environment would result, for example,

- Potential waste minimization alternatives include utilizing a squeegee or cloth rags provided by a laundering service instead of disposing of rags.

- Chemicals utilized for cleaning are dispensed from aerosol cans or disposable spray bottles. Empty containers are discarded in the regular trash. Potential waste minmization alternatives include purchasing chemicals and cleaners in bulk or concentrates, and utilizing reusable plastic trigger bottles instead of aerosol cans.

Suggestions or comments about pollution prevention or waste minimization are always welcome by SMD management.

8) Are there any key Environmental-specific Competency Requirements for this position?

- Hazardous Waste Generator (HP-RCRIGEN3)
- Environmental Protection Training (GE-ENV-GET)

Click Here to Fill Out Reading Acknowledgment Form